

SPACE@HOPKINS

Bolster your R&D and recruitment by
partnering with Hopkins' enterprise-wide
aerospace research initiative



THE CAMPAIGN FOR JOHNS HOPKINS



JOIN A LEADER IN ACADEMIC SPACE RESEARCH

As members of an industry that relies on calculations based on the speed of light, companies like yours often have to move just that fast. To stay current and profitable, you must develop ideas and build and hone products to capture market share quickly — and it would help to have an external partner you can rely on.

Johns Hopkins, a leader in academic space research since its earliest days, can help. Through the new Space@Hopkins initiative, you can connect with dozens of Hopkins departments, divisions, and affiliated institutions. As an annual Space@Hopkins sponsor or advisor at the \$25,000 or \$50,000 level, you will enjoy access to expert faculty and researchers, outstanding prospective employees, and groundbreaking ideas that will shape the future of the aerospace and related industries.

COLLABORATE WITH BRILLIANT MINDS — AND FUTURE STAR EMPLOYEES

As a Space@Hopkins sponsor or advisor, you'll have access to internationally renowned experts and joint research that will expand your current capabilities. In addition to Director Chuck Bennett — a Bloomberg Distinguished Professor and Alumni Centennial Professor in the Krieger School of Arts and Sciences and senior scientist at the Applied Physics Laboratory (APL) — you can connect with experts including:

- Nobel laureates and other top faculty
- Leaders of NASA mission control and human research
- Researchers working with astronauts Mark and Scott Kelly to study the effects of space flight on the human body.

These exceptional scholars train a corps of graduate and undergraduate students who will become leading candidates for positions within government and industry. Space@Hopkins sponsors and advisors will gain enhanced access to these highly qualified potential employees, who are prepared to design and build industry-leading products and systems.

EXPLORE INTERDISCIPLINARY RESEARCH AT THE LEADING EDGE

Hopkins is unique among American institutions in its combination of multiple areas of widespread expertise — including top medical, engineering, and science schools and a space research center in the APL. Space@Hopkins connects the brightest minds in these areas, facilitating the development and testing of paradigm-changing ideas that spring from interdisciplinary research. The

Generating “ideas that can change the world”

Hopkins experts from across the institution — including physics, engineering, astronomy, earth and planetary sciences, medicine, and political science — gathered last fall to discuss sending a manned mission to Mars. The conversation, which punctuated Space@Hopkins' annual symposium, is a perfect example of the value the initiative can provide for companies like yours, says Director Chuck Bennett. By identifying space

researchers throughout Hopkins, Space@Hopkins can quickly mobilize them in response to opportunities for funding or partnerships — such as a recent NASA call for proposals. “Space@Hopkins is one of the only places where you can get all of these perspectives, in the same room, at the same time,” Bennett says. “In those interdisciplinary intersections are ideas that can change the world.”



FACULTY TOBIAS MARRIAGE (L) AND CHUCK BENNETT (R) EXAMINE A COMPONENT OF HOPKINS' COSMOLOGY LARGE-ANGULAR SCALE SURVEYOR (CLASS) TELESCOPE WITH LANCE CORBETT (C), A&S '18.

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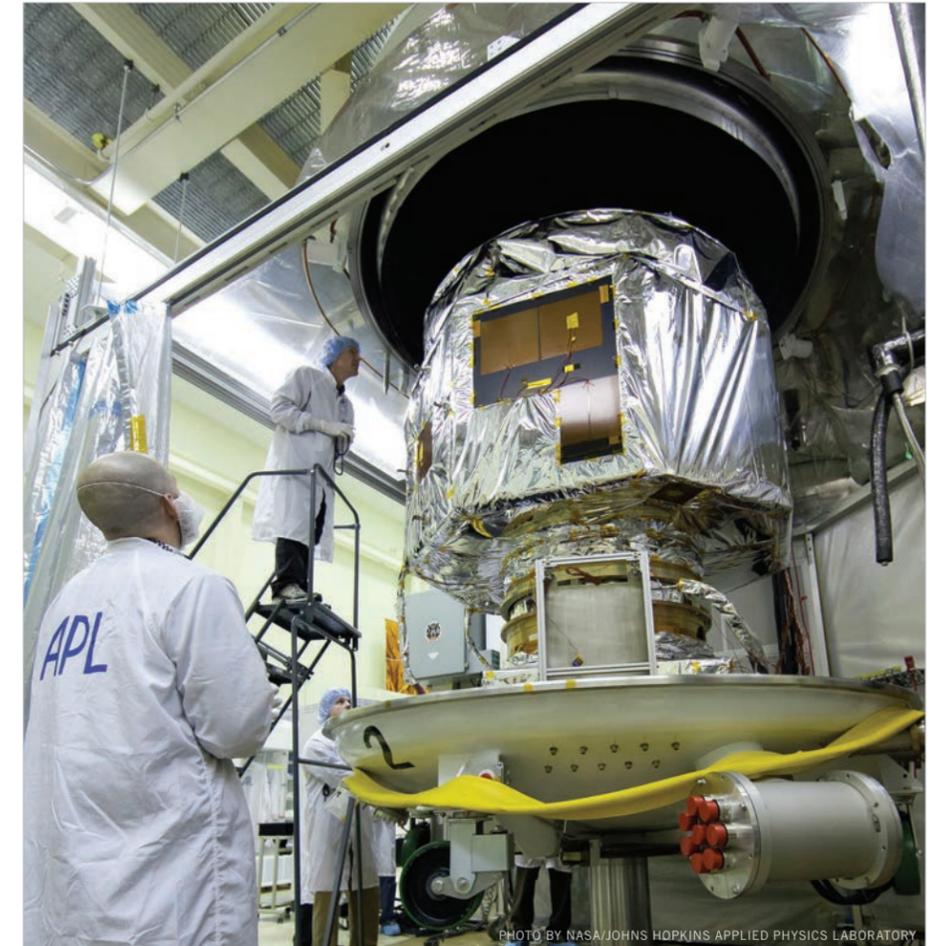
first Space@Hopkins seed grants, awarded to faculty in 2016, address topics including:

- The effects of radiation exposure on astronaut sleep and health
- Engineering lighter, more durable materials for spacecraft construction
- How microgravity affects 3D-printed cardiac muscle (see back cover).

As a Space@Hopkins sponsor or advisor, your support helps fund these and future projects, and gives you exclusive invitations to special events that highlight the products of this research, including an annual symposium.

TAP IN TO OUR POWERFUL NETWORK

Your partnership with Space@Hopkins provides a link to our deep pool of industry connections. In addition to APL, Hopkins faculty and students routinely work with scientists at NASA Goddard Space Flight Center. The Space Telescope Science Institute — a world-class astronomical research and mission operations center that manages the Hubble Space Telescope, among others — has its headquarters on the Hopkins Homewood Campus. Several Hopkins faculty, including Nobel laureate Adam Riess, a Bloomberg Distinguished Professor and Thomas J. Barber Professor in Space Studies, hold joint appointments with the institute. Hopkins also directs the NASA Maryland Space Grant Program, which has promoted space education and outreach throughout the state since 1989. Your role as a Space@Hopkins sponsor or advisor will provide you with access to all participants in the Space Grant Program.



APL ENGINEERS PLACE A VAN ALLEN PROBE IN A THERMAL-VACUUM CHAMBER BEFORE TESTING A PROPULSION SYSTEM IN CONDITIONS THAT SIMULATE OUTER SPACE.

Did you know?

In 1963, Hopkins demonstrated the first gravity-gradient stabilized spacecraft orbit, and in 1975, Hopkins' GEOS C spacecraft demonstrated the first satellite-to-satellite tracking — key advancements in the development of satellites as we know them today.



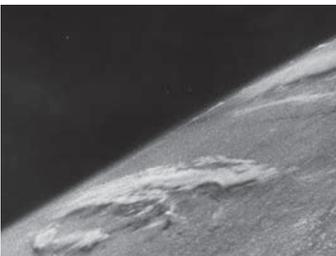
Preparing bodies for prolonged space travel

Astronauts spend more time in space than ever before, so understanding how microgravity affects the body — especially the heart — is a prime concern. Examining how people's heart cells behave while they're in space is not yet possible, but mechanical engineering professor Yun Chen and cardiac surgeon Narutoshi Hibino are using a Space@Hopkins seed grant to develop an alternative experiment. Using a 3D printer to create human heart tissue from stem cells and a machine that simulates a zero-gravity environment, Chen and Hibino will observe how the tissue behaves and test methods to help protect and strengthen the tissue. "We had worked together to help patients on Earth," Chen says, "but it wasn't until we heard about the Space@Hopkins grant that we asked: can we help astronauts, too?"



PHOTO BY MARSHALL CLARKE

ENGINEERING PROFESSOR YUN CHEN (L) AND CARDIAC SURGEON NARUTOSHI HIBINO (C) PREPARE TO 3D-PRINT HUMAN HEART TISSUE WITH HELP FROM JEYANI NARAYAN (R), ENGR '19.



Did you know?

The first photo of Earth from space was taken by a Hopkins camera on a V2 rocket. It appeared in the October 1950 edition of *National Geographic*.

JOIN US TODAY

To gain access to our research and our outstanding students, become a Space@Hopkins sponsor or advisor:

SPONSOR — \$25,000 annually

Employee recruitment: Meet and hire undergraduate and graduate students through the Space@Hopkins internship program and other exclusive recruiting opportunities.

Annual symposium invitation: Hear about Space@Hopkins experts' latest discoveries, learn about the intersections of research and policy, and take advantage of networking time with faculty and researchers.

Brand visibility: Prominently place your company name and link on the Space@Hopkins website.

ADVISOR — \$50,000 annually

All benefits available to Sponsor-level partners

Corporate Advisory Board membership: Collaborate with Space@Hopkins experts on specific research projects of relevance to your company.

To discuss these opportunities or learn more about Space@Hopkins, please contact:

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